

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1

of 5

Compleat if Known

Application Number	
Filing Date	Even Date Herewith
First Named Inventor	Shlomo YITZCHAIK
Group Art Unit	
Examiner Name	
Attorney Docket Number	YITZCHAIK =1A

U.S. PATENT DOCUMENTS						
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	AA	4,342,945		KETCHPEL	08-03-1982	
	AB	4,391,888		CHANG et al	07-05-1983	
	AC	4,690,750		ROXLO et al	09-01-1987	
	AD	4,703,096		CHOE	10-27-1987	
	AE	4,746,181		HAYAKAWA et al	05-24-1988	
	AF	4,859,625		MATSUMOTO	08-22-1989	
	AG	5,076,860		OHBA et al	12-31-1991	
	AH	5,079,594		MITSUYU et al	01-07-1992	
	AI	5,155,566		NAKAYAMA et al	10-13-1992	
	AJ	5,166,100		GOSSARD et al	11-24-1992	
	AK	5,240,762		MIURA et al	08-31-1993	
	AL	5,254,207		NISHIZAWA et al	10-19-1993	
	AM	5,274,246		HOPKINS et al	12-28-1993	
	AN	5,284,779		MIYANGA	02-08-1994	
	AO	5,296,403		NISHIZAWA et al	03-22-1994	
	AP	5,349,209		MOYER et al	09-20-1994	
	AQ	5,374,570		NASU et al	12-20-1994	
	AR	5,383,212		KNOX et al	01-17-1995	
	AS	5,401,615		PAI et al	03-28-1995	
	AT	5,424,580		NORMAN et al	06-13-1995	
	AU	5,434,102		WATANABE et al	07-18-1995	
	AV	5,532,511		NISHIZAWA et al	07-02-1996	
	AW	5,532,550		ADLER	07-02-1996	
	AX	5,541,478		TROXELL et al	07-30-1996	
	AY	5,587,329		HSEUH et al	12-24-1996	
	AZ	5,612,549		NELSON et al	03-18-1997	
	BA	5,614,435		PETROFF et al	03-25-1997	
	BB	5,623,476		EGUCHI et al	04-22-1997	
	BC	5,641,611		SHIEH et al	06-24-1997	
	BD	5,656,508		SO et al	08-12-1997	
	BE	5,677,545		SHI et al	10-14-1997	
	BF	5,681,756		NORMAN et al	10-28-1997	
	BG	5,692,075		HWANG et al	11-25-1997	
	BH	5,693,139		NISHIZAWA et al	12-02-1997	
	BI	5,693,862		SHI et al	12-02-1997	
	BJ	5,707,745		FORREST et al	01-13-1998	

Examiner  
Signature*Doc Proval*Date  
Considered

6/8/64

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A/PTO		Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	
		Filing Date	Even Date Herewith
		First Named Inventor	Shlomo YITZCHAIK
		Group Art Unit	1711
		Examiner Name	
Sheet 2	of 5	Attorney Docket Number	YITZCHAIK =1A

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	BK	AGRANOVICH et al, "Fermi resonance interface modes in organic multilayer structures", <u>Chem Phys Lett</u> 210(4,5,6):458-462 (1993)	
	BL	ANDERSON et al, "Synthesis and Third-Order Nonlinear Optical Properties of a Conjugated Porphyrin Polymer", <u>Angew Chem Int Ed Eng</u> 33(6):655-657 (1994)	
	BM	BIRD et al, "Velocity Distributions in Laminar Flow", in <u>Transport Phenomena</u> Wiley, New York, NY, Chapter 2, pp. 34-70 (1960)	
	BN	BRAUN et al, "Visible light emission from semiconducting polymer diodes", <u>Appl Phys Lett</u> 58:1982-1984 (1991)	
	BO	BRAUN et al, "Electroluminescence and electrical transport in poly(3-octylthiophene)", <u>J Appl Phys</u> 72(2):564-568 (1992)	
	BP	BURN et al, "Chemical tuning of electroluminescent copolymers to improve emission efficiencies and allow patterning", <u>Nature</u> 356:47-49 (1992)	
	BQ	BURROUGHES et al "Light-emitting diodes based on conjugated polymers", <u>Nature</u> 347:539-541 (1990)	
	BR	CHEMLA et al, "Room Temperature Excitonic Nonlinear Absorption and Refraction in GaAs/AlGaAs Multiple Quantum Well Structures", <u>IEEE J Quantum Electron</u> QE-20:265-275 (1984)	
	BS	DONOVAN et al, "Determination of anisotropic electron transport properties of two Langmuir-Blodgett organic multiple quantum wells", <u>Thin Solid Films</u> 244:110-114 (1993)	
	BT	DONOVAN et al, "Determination of the parallel and perpendicular intermolecular tunneling rates in two Langmuir-Blodgett quantum well systems" <u>Thin Solid Films</u> 232:923-927 (1994)	
	BU	FORREST et al, "Ultrahigh-vacuum quasiepitaxial growth of model van der Waals thin films. II. Experimental", <u>Phys Rev B</u> 49(16):11309-11321 (1994)	
	BV	GREENHAM et al, "Efficient light-emitting diodes based on polymers with high electron affinities", <u>Nature</u> 365:628-630 (1993)	

Examiner Signature		Date Considered	6/8/04
--------------------	--	-----------------	--------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)



Sheet 3

of 5

**Complete if Known**

Application Number	
Filing Date	Even Date Herewith
First Named Inventor	Shlomo YITZCHAIK
Group Art Unit	1711
Examiner Name	
Attorney Docket Number	YITZCHAIK =1A

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	BW	HASKAL et al, "Finite size effects observed in the fluorescence of ultrathin crystalline organic films grown by organic molecular beam deposition", <u>Chem Phys Lett</u> 219:325-330 (1994)	
1	BX	HASKAL et al, "Excitons and exciton confinement in crystalline organic thin films grown by organic molecular-beam deposition", <u>Phys Rev B</u> 51:4449-4462 (1995)	
	BY	HIRAMOTO et al, "Directed beam emission from film edge in organic electroluminescent diode", <u>Appl Phys Lett</u> 62(7):666-668 (1993)	
	BZ	HONG et al, "Possible evidence for quantum-size effects in self-assembled ultrathin films containing conjugated copolymers", <u>Appl Phys</u> 79(6):3082-3088 (1996)	
	CA	JENEKHE et al, "Excimers and Exciplexes of Conjugated Polymers", <u>Science</u> 265:765-768 (1994)	
	CB	KIDO et al, "Bright blue electroluminescence from poly (N-vinylcarbazole)", <u>Appl Phys Lett</u> 63(19):2627-2629 (1993)	
	CC	KIDO et al, "White light-emitting organic electroluminescent devices using the poly(N-vinylcarbazole) emitter layer doped with three fluorescent dyes", <u>Appl Phys Lett</u> 64:815-817 (1994)	
	CD	KUBONO et al, "Polymer Thin Films Prepared by Vapor Deposition", <u>Prog Polym Sci</u> 19:389-438 (1994)	
	CE	LAM et al, "Optical Nonlinearities in Crystalline Organic Multiple Quantum Wells", <u>Phys Rev Lett</u> 60(12):1614-1617 (1991)	
	CF	LI et al, "Chromophoric Self-Assembled Multilayers. Organic Superlattice Approaches to Thin-Film Nonlinear Optical Materials", <u>J Am Chem Soc</u> 112:7389-7390 (1990)	
	CG	MARUO et al, "Surface characterization of fluorinated polyimide films grown by vapor deposition polymerization, <u>J Vac Soc Technol A</u> 11(5):2590-2596 (1993)	
	CH	NAIWA HS, "Organic Materials for Third-Order Nonlinear Optics", <u>Adv Mater</u> 5(5):341-358 (1993)	

Examiner  
SignatureDate  
Considered

6/8/04

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A/PTO		Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	
		Filing Date	Even Date Herewith
		First Named Inventor	Shlomo YITZCHAIK
		Group Art Unit	1711
		Examiner Name	
Sheet 4 of 5	Attorney Docket Number	YITZCHAIK =1A	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
✓	CI	OHMORI et al, "Observation of spectral narrowing and emission energy shift in organic electroluminescent diode utilizing 8-hydroxyquinoline aluminum/aromatic diamine multilayer structure", <u>Appl Phys Lett</u> 63(14):1871-1873 (1993)	
	CK	OSAHENI et al, "Efficient Blue Luminescence of a Conjugated Polymer Exciplex", <u>Macromolecules</u> 27:739-742 (1994)	
	CL	PESSA et al, "Characterization of surface exchange reactions used to grow compound films", <u>Appl Phys Lett</u> 38(3):131-132 (1981)	
	CM	SHIROTA et al, "Multilayered organic electroluminescent device using a novel starburst molecule, 4,4',4"-tris(3-methylphenyl/phenylamino)triphenylamine, as a hole transport material", <u>Appl Phys Lett</u> 65(7):807-809 (1994)	
	CN	SO et al, "Quasi-epitaxial growth of organic multiple quantum well structures by organic molecular beam deposition", <u>App Phys Lett</u> 56(7):674-676 (1990)	
	CO	SO et al, "Growth and Characterization of Organic Semiconductor Heterojunctions and Multiple Quantum Wells", <u>SPIE</u> 1285:95-103 (1990)	
	CP	SO et al, "Evidence for Exciton Confinement in Crystalline Organic Multiple Quantum Wells", <u>Phys Rev Lett</u> 66(20):2649-2652 (1991)	
	CQ	TAKAHASHI et al, "Preparation of Ultrathin Films of Aromatic Polyamides and Aromatic Poly(amide-imides) by Vapor Deposition Polymerization" <u>Macromolecules</u> 24:3543-3546 (1991)	
	CR	TANAKA et al, "Doping effect on organic semiconductive thin film by plasma polymerization of 3,4,9,10-perylenetetracarboxylic dianhydride", <u>Synthetic Metals</u> 65:81-84 (1994)	
	CS	TATSUURA et al, "Electro-optic polymer waveguide fabricated using electric-field-assisted chemical vapor deposition", <u>Appl Phys Lett</u> 60(14):1661-1663 (1992)	
	CT	ULMAN A, "Formation and Structure of Self-Assembled Monolayers", <u>Chem Rev</u> 96:1533-1554 (1996)	
✓	CU	WANG et al, "Dependence on Piezoelectric and Pyroelectric Activities of Aromatic Polyurea Thin Films on Monomer Composition Ratio", <u>Jap J Appl Phys</u> 32:2768-2773 (1993)	

Examiner Signature	<i>Doc [Signature]</i>	Date Considered	6/8/04
--------------------	------------------------	-----------------	--------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A/PTO		Complete If Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	
		Filing Date	Even Date Herewith
		First Named Inventor	Shlomo YITZCHAIK
		Group Art Unit	
		Examiner Name	
Sheet 5	of 5	Attorney Docket Number	YITZCHAIK =1A

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	CV	YITZCHAIK S, "Chromophoric Self-Assembled NLO Multilayer Materials. Real Time Observation of Monolayer Growth and Microstructural Evolution by <i>in Situ</i> Second Harmonic Generation Techniques", <u>J Phys Chem</u> 97:6958-6960 (1993)	
	CW	YOSHIMURA et al, "Polymer films formed with monolayer growth steps by molecular layer deposition", <u>Appl Phys Lett</u> 59(4):482-484 (1991)	
	CX	YOSHIMURA et al, "Quantum wire and dot formation by chemical vapor deposition and molecular layer deposition of one-dimensional conjugated polymer", <u>Appl Phys Lett</u> 60(3):268-270 (1992)	
	CY	ZAKHIDOV et al, "Polarization double barriers at the interfaces in organic multilayered structures and superlattices", <u>Synthetic Metals</u> 64:155-165 (1994)	

Examiner Signature		Date Considered	6/8/04
--------------------	--	-----------------	--------

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.